

Title (en)
INDUCTIVELY COUPLED LOOP ANTENNA FOR A RADIO FREQUENCY IDENTIFICATION READER

Title (de)
INDUKTIV GEKOPPELTE SCHLEIFENANTENNE FÜR EINEN HOCHFREQUENZIDENTIFIKATIONSLESER

Title (fr)
ANTENNE À BOUCLE COUPLÉE INDUCTIVEMENT POUR LECTEUR D'IDENTIFICATION RADIOFRÉQUENCE

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Application
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Abstract (en)
[origin: WO2009005504A1] Systems and methods are described for reading EID tags in difficult to reach locations using a portable RFID reader. In many embodiments, the system includes a portable RFID reader and one or more stationary antenna assemblies. The stationary antenna assemblies typically include a loop antenna in a first location and a ferrite antenna in a second location. EID tags in the reading zone of the loop antenna can be read using the portable RFID reader via an inductive coupling between the resonant antenna in the portable RFID reader and the ferrite antenna in the stationary antenna assembly. One embodiment of the invention includes a portable reader having reader circuitry configured to generate an activation signal, a first resonant antenna, where the first resonant antenna is electrically connected to the reader circuitry, a reader housing containing the reader circuitry and the first resonant antenna, and a stationary antenna assembly having a resonant antenna unit including a housing and a second resonant antenna, a loop antenna unit including a housing and a loop antenna and an electrical connection between the resonant antenna unit and the loop antenna unit. In addition, the first resonant antenna in the portable reader is inductively coupled to the second resonant antenna in the stationary antenna assembly.

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Cited by
CN103956563A; US10667797B2; US10299768B2; US10646207B2; US10842471B2

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